REMARKS

Claims 1 through 7 are pending in the instant application. Claims 1 through 7 have been rejected. Claims 1 and 7 have been amended. Claims 4 through 6 have been canceled without prejudice. New claims 8 and 9 have been added. Support for these amendments is provided in the claims as originally filed and in the specification at page 12, lines 8-18 and Example 2. No new matter is added by these amendments. Reconsideration is respectfully requested in light of these amendments and the following remarks.

I. Drawings

The objection to the drawings was addressed in the response filed March 6, 2006.

II. Rejection of Claim 3 under 35 U.S.C. 112, first paragraph ~ Written Description

Claim 3 has been rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. In particular, the Examiner suggests that claim 3 is a broad generic claim encompassing all potential plant cell growth regulators from all possible synthetic compounds, natural compounds, plant extract and fraction and extracts containing microorganism culture solutions. Further, the Examiner suggests that the specification fails

to provide adequate written description of the genus of the claims and does not reasonable convey to one skilled in the relevant art that the inventor(s) as the time the application was filed, had possession of the entire scope of the claimed invention.

Applicants respectfully traverse this rejection.

Claim 3 is a dependent claim from claim 1 specifying candidate plant growth regulators which can be screened via the method of claim 1. It is not a composition claim for which a sufficient number of species in a genus claim must be described to show possession. Further efficacy of the method of claim 1 in screening various candidate plant regulators in each of the categories set forth in claim 3 is demonstrated in Examples 3 through 6 of the instant specification. Accordingly the written description requirements for this claim are met.

Withdrawal of this rejection under 35 U.S.C. 112, first paragraph for lack of written description is respectfully requested.

III. Rejection of Claims 1-4 under 35 U.S.C. 102(b)

Claims 1-4 have been rejected under 35 U.S.C. 102(b) as being anticipated by Bhide et al. (U.S. Patent 6,150,158). The Examiner suggests that Bhide et al. teaches a method for

high throughput screening of plant growth regulators comprising the steps of culturing photomixotrophic cells (col. 5, lines 50-67) to which candidates for plant cell growth regulators were added (col. 7, Table 2) and measuring cell growth on a large scale at the same time (col. 23, lines 34-61). Further, the Examiner suggests that Bhide et al. teaches the use of Nicotiana tabacum photomixotrophic cells (col. 6, Table 1), the use of plant growth regulators selected from synthetic and natural compounds (col. 7, Table 2), and the use of microwell plates.

Applicants respectfully traverse this rejection.

At the outset, Applicants respectfully disagree with the Examiner's characterization of the teaching of Bhide et al. Contrary to the Examiner's suggestion no where in lines 56-67 of col. 5 do Bhide et al. teach culturing photomixotrophic cells. Instead, Bhide et al. teach use of intact plants (see Abstract) and seeds (see line 56 of col. 5).

Further, to evaluate herbicidal damage of test compounds, Bhide et al. employed a visual assay, a biomass assay, and/or a chlorophyll assay (see col. 23-24). In contrast, the present invention employs a TTC assay.

Thus, in an earnest effort to advance the prosecution of this case and to distinguish the present invention from art such as Bhide et al. Applicants have amended claim 1 to state the steps of:(a) culturing photomizotrophic cells in a microwell plate to which candidates for plant growth regulators were added; (b) adding 2,3,5-triphenyltetrazolium chlorolide; (c) removing solutions from the microwell plate and reacting the solutions with ethanol; (d) transferring the reacted solutions of step (c) into a new microwell plate; and(e) measuring optical density of the microwell plate of step (d) with a high throughput screening reader. Support for this amendment is provided in original claim 6, now canceled.

Since Bhide et al. do not teach a screening assay with these steps, this reference cannot anticipate the instant claimed invention.

Withdrawal of this rejection under 35 U.S.C. 102(b) is therefore respectfully requested.

IV. Rejection of Claims 1-7 under 35 U.S.C. 103(a)

Claims 1-7 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Bhide et al. (U.S. Patent 6,150,158 in view of Byth et al. (2001). The Examiner suggests that it would have been obvious to the ordinary artisan at the

time of the instant invention to use the TTC assay method as a means for assessing the cell proliferation and/or viability of plant cell cultures as an alternative method to the plant biomass, chlorophyll, reporter gene and luminescent proteins assays taught by Bhide et al. because it is sound scientific practice to have as much confirming data from a variety of sources to assure the accuracy of reported results.

Applicants respectfully traverse this rejection.

To establish a *prima facie* case of obvious, three basic criteria must be met. First there must be some suggestion or motivation to modify the teachings of the reference. Second, there must be a reasonable expectation of success. Finally the prior art must teach or suggest all the claim limitations. MPEP §2143.

The cited combination of references does not meet these three criteria.

As already discussed in Section III, supra, teachings of Bhide et al. relate to assays conducted on intact plants (see Abstract) and seeds (col. 5, line 56), not photomixotrophic cells as claimed in the instant invention.

Byth et al. teaches a method for quantitatively assessing the viability and/or proliferation of plant cells cultures, not photomixotrophic cells.

Thus, the cited combination of references fails to teach or suggest all the claim limitations.

Further, as taught at pages 5-6 of the present invention, photomixotrophic cells, when employed in the present invention were found to reflect the effect of plant growth regulators on plates. Photomixotrophic cells have the same chloroplast structure as higher plants. Further the growth speed of these cells is very fast. In addition, the cells are uniform, so that they can be inoculated by a fixed concentration and cultured even in a microwell size plates. Such advantages were not predicted by the combined teachings of Bhide et al. and Byth et al.

Withdrawal of this rejection under 35 U.S.C. 103(a) is therefore respectfully requested.

V. Conclusion

Applicants believe that this submission overcomes all pending rejections in this case and comprises a full and complete response to the Office Action of record.

Accordingly, favorable reconsideration and subsequent allowance of the pending claims is earnestly solicited.

Respectfully submitted,

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Date: April 4, 2006

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